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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,685	03/02/2004	James Webb	3335.2.2	2594
28049	7590	02/16/2006	EXAMINER	
PATE PIERCE & BAIRD 215 SOUTH STATE STREET, SUITE 550 PARKSIDE TOWER SALT LAKE CITY, UT 84111			SAVAGE, MATTHEW O	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/791,685

Applicant(s)

WEBB, JAMES

Examiner

Matthew O. Savage

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 5-11, 16-37 and 72 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12-15 and 38-71 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10-12-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Applicant's election without traverse of group I and species C1 in the reply filed on 12-7-05 is acknowledged.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 12-15, and 38-71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Concerning claims 1 and 38, it is unclear as to what structural relationship "downstream from said primary water treatment station" implies.

Regarding claims 2 and 38, "the water flow rate" and "the desired concentration" lack antecedent basis. In addition, it is unclear as to how the "water flow rate" is created since no means for creating a flow has been claimed.

As to claims 4 and 40, "the pump speed/speed of the pump" and "said pump" lack antecedent basis. In addition, it is uncertain as to how the pump is connected to the primary water treatment station and the sulfurous generator since no means has been specified.

Regarding claims 13, 15, 48, and 50, the location of the sulfurous generator in relation to the secondary and tertiary treatment stations is unclear.

Concerning claim 38, it is unclear as to what structure a "hydraulic air inlet shut off valve safety system" implies.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,948,774 to Lindman.

With respect to claim 1, Lindman discloses a primary water treatment station 12, 16 (see FIG. 1), and a solid-based sulfurous generator (e.g., the combination of generator 26, flow line 27, flow line 21, and treatment chamber 26, see lines 46-68 of col. 5) downstream from the primary water treatment station for producing aqueous sulfurous acid for further treatment of the water.

Concerning claim 2, Lindman discloses a control system 15, 29 for controlling the water flow rate (e.g., introduced through conduits 21 and 31, see lines 36-37 and lines 56-62 of col. 5) through the generator to achieve the desired concentration of sulfurous acid in the water being treated.

As to claim 3, Lindman discloses a pH sensor 30, controller 29, and flow control means associated with line 31 for adjusting the water flow rate through the generator to achieve the desired concentration.

Concerning claim 13, Lindman discloses a secondary water treatment station (e.g., the combination of elements 75, 86, 96, and 97) downstream from the primary water treatment station 12, 16.

Regarding claim 14, Lindman discloses the secondary water treatment station as including aeration tanks 96, 96 and clarifiers 75, 86.

As to claim 15, Lindman discloses tertiary water treatment 115 downstream from the primary water treatment stage.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admission from line 19 of page 8 to line 17 of page 9 of the specification in view of U.S. Patent 6,346,198 to Watson et al and U.S. Patent 3,948,774 to Lindman.

With respect to claim 1, applicant admits that a water treatment system including a primary water treatment station is known in the art but fails to specify a generator downstream of the primary water treatment station for producing aqueous sulfurous acid for further treating the water. Watson et al disclose a generator 40 for producing aqueous sulfurous acid for further treating waste water and teaches that an arrangement removes excess chlorine from the treated water (see lines 32-52 of col. 6). It would have been obvious to have modified the water treatment system disclosed by applicant to be known in the art so as to have included the sulfurous acid generator as suggested by Watson et al in order to provide a means to remove excess chlorine from

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the treated water. Applicant's admission and Watson et al fail to specify a solid base sulfurous generator. Lindman discloses a waste water treatment process that includes a solid based sulfurous generator (e.g., including a generator for forming sulfur dioxide, see line 51 of col. 5) and suggests that such an arrangement provides an economical source of sulfur dioxide gas. It would have been obvious to have modified the combination suggested by applicant's admission and Watson et al so as to have included a solid based sulfurous generator as suggested by Lindman in order to provide an economical source of sulfur dioxide.

Concerning claims 12-15, applicant admits that the details of the primary, secondary, and tertiary stations are known in the art.

Claim 4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art fails to teach or suggest the flow control means including a variable speed drive for adjusting a pump speed to control the flow rate of treated water through the sulfurous generator with the pump being located between the primary water treatment station and the sulfurous generator as recited in instant claim 4.

Claims 38-71 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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The prior art fails to teach or suggest the limitation of the hydraulic air inlet shut off safety system for automatically reducing the combustion air to the sulfurous generator if water stops being delivered to the sulfurous generator as recited in claim 38.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O. Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

*M. Savage*  
Matthew O Savage  
Primary Examiner  
Art Unit 1724

mos  
February 14, 2006